

LEAD INDUSTRIES ASSOCIATION

400 LEXINGTON AVENUE

NEW YORK 17, N. Y.

RED LEAD DIVISION

August 16, 1949

**SUBJECT: RED LEAD TECHNICAL COMMITTEE
MEETING MINUTES - JUNE 30,
JULY 1, 1949**

To the Members of the Red Lead Technical Committee;

You will find attached the final draft of the Minutes of the Red Lead Technical Committee Meeting held on June 30 and July 1, 1949, in the offices of the Association.

Very truly yours,

C. J. Vander Valk
C. J. Vander Valk
Technical Director



N2847

LEAD INDUSTRIES ASSOCIATION

480 LEEDINGTON AVENUE

NEW YORK 17, N. Y.

RED LEAD DIVISION

RED LEAD TECHNICAL COMMITTEE

New York, New York

June 30, July 1, 1949

A meeting of the Red Lead Technical Committee was held on June 30 and July 1, 1949 in the offices of the Lead Industries Association.

Present

Mr. George Diehlman
Mr. A. C. Gots
Dr. J. O. Johnstone
Mr. O. F. Shobe

Representing

National Lead Company
Eagle-Picher Company
Hammond Lead Products, Inc.
The Glidden Company

Mr. L. L. Carrick, Director of Red Lead Research, Meeting Chairman
Mr. Robert L. Ziegfeld, Secretary, Lead Industries Association
Mr. C. J. Vander Valk, Technical Director, Red Lead Division

REVIEW OF STATUS OF FIRST REPORT TO BE PUBLISHED ON L.I.A. ATMOSPHERIC PROGRAM

The meeting was opened at 10:00 A.M. on June 30 with a report by the Technical Director on the status of the copy for Report No. 1 of "Corrosion Inhibitive Paints For Iron And Steel Exposed To The Atmosphere".

This report was prepared by the Committee for publication and circulation to maintenance and specification engineers, paint formulators and others interested in protective coatings for ferrous metals. It contains a detailed description of test procedures and paint compositions and will be followed at practical intervals with progress reports describing the performance of the ninety-five corrosion inhibitive paints at each of the five exposure sites.

At the meeting held on March 24, 1949, the Red Lead Technical Committee appointed a sub-committee consisting of Mr. George Diehlman, Mr. Robert L. Ziegfeld, and the Technical Director to expedite the early publication of this report. This sub-committee was requested to prepare the final draft incorporating the additions and revisions previously approved by the Committee and any editorial refinements deemed necessary.

The Technical Director informed those present that the final draft of the report was ready for publication and had been submitted to two printing companies for proposed design layouts and price quotations. It was pointed out that the printing and mailing of this report could be accomplished in two or three weeks.



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The Committee then decided it would be undesirable to mail this important promotional report during the summer vacation season. It was agreed to delay the mailing until the first or second week of September.

ADOPTION OF FORM FOR PROGRESS REPORTS ON L.I.A. ATMOSPHERIC PROGRAM

At the Committee meeting held on May 3, 1949 it was decided to publish subsequent progress reports on the L.I.A. Atmospheric Program in a single page chart form if at all practical.

In line with this decision, the Technical Director worked out a suggested single page form with a printing expert. This form would permit the use of eight point type throughout and accommodate data on all of the primer points at the five exposure sites if both sides of the paper were utilized. A photostat of the outline of this suggested form is attached to these minutes as Exhibit A.

It was agreed that this method of publishing progress reports would be acceptable if the folded chart could be enlarged to accommodate all of the data on one side of the sheet. The Technical Director was asked to investigate this possibility.

REVIEW OF NEW RED LEAD TECHNICAL LETTER

The second draft of Red Lead Technical Letter No. 4 was reviewed by the Committee. The following changes were recommended:

1. The presentation of all varnish formulations on the customary pounds-gallons basis rather than in percentage form.
2. Inclusion of the new Bureau Of Ships Paint Formula No. 116 in the section on paints for intermittent immersion. This is to be done if approved by Mr. Graham of the Bureau of Ships.
3. Transference of Formula 4-7, now located in Intermittent immersion section, to the marine atmospheric section and replacement of it with Formula 4-2. Both of these paints performed well in marine atmospheres and in intermittent immersion exposures. This change was proposed to give a wider selection of vehicles for atmospheric exposure.
4. Inclusion of a paragraph suggesting that a confirmatory evaluation of each formula be made before it is adopted.

Several changes in wording of the text material were also agreed upon.

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LABELING OF RED LEAD PAINTS

At a meeting of the Red Lead Technical Committee held on May 4, 1949, two new sets of proposed resolutions were formulated for the labeling of paints containing red lead. These newly proposed resolutions were prepared after Mr. Stewart of the National Lead Company asked the Committee to reconsider the resolutions drawn up on December 6, 1945 at the request of the National Paint, Varnish and Lacquer Association.

Following the May 4 meeting the two sets of proposed resolutions with the 1945 resolutions were circulated among the executives of the companies represented on the Red Lead Technical Committee. These new proposed resolutions differed from those previously adopted in that they permitted the use of the term "Red Lead Paint" for compositions containing not less than 75% red lead by weight of the total pigment. The original resolutions stated the term "Red Lead Paint" could be used only for labeling paints containing a minimum of 98% red lead by weight of the pigment and that paints containing lesser amounts of red lead, down to 40%, must be designated as "Modified Red Lead Paints". The newly proposed resolutions reserved the use of the name "Pure Red Lead Paint" for products containing a minimum of 96% red lead.

After the majority of member company representatives present reported that interested parties in their companies had no objection to the newly proposed resolutions, the Committee prepared a worded draft for the final consideration of member companies manufacturing red lead and red lead paints. A copy of this draft is attached to these minutes as Exhibit B.

It was next agreed that if approved by the member companies, these resolutions be submitted to the National Paint, Varnish and Lacquer Association for comment and approval.

GAS HOLDER PROJECT

Mr. Goetz read a report on his recent visits to the Stacy Brothers Gas Construction Company and the Stacy Manufacturing Company. Both of these concerns are engaged in the manufacture of gas holders. Since the information obtained from the two companies on the erection and painting of gas holders was so nearly alike, a composite report was prepared.

It was reported that gas holders are generally shipped to the site of erection unpainted and that the contractor furnishing the holder is usually requested to paint the gas holder after it is erected. The purchaser usually specifies some particular brand of paint. This is usually a private brand, the composition of which is not known by the contractor. In many cases a "lead" paint is used, which is taken to mean ~~red lead~~ in oil.

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Since this report described the problems to be dealt with in the painting of gas holders in considerable detail, Mr. Coets was asked to submit a copy to the Technical Director for circulation to the committee members. He agreed to do this.

The Technical Director said that he had called on the American Gas Association and requested their cooperation in obtaining sites for service tests of several L.I.A. gas holder paint systems. Since the man directly concerned with the painting of gas holders, Mr. King, was on vacation nothing definite was accomplished. However other members of the staff of the American Gas Association were favorably disposed to the idea and thought that a cooperative program might be arranged when Mr. King returned. The Committee agreed that such cooperation would probably simplify the organization of the project and add prestige to eventual published results. The Technical Director was requested to continue working with the American Gas Association on this project.

PANAMA CANAL PROJECT

In June, 1948 several suggested paint systems were submitted by the Committee to the Special Engineering Division, Panama Canal for use in a long term paint evaluation project. The purpose of this project is the development of improved paint systems for the protection of the various iron and steel installations at the Panama Canal. This embraces surfaces exposed to the atmosphere, Atlantic and Pacific sea water, (partially and totally immersed) and fresh water.

Five systems were submitted by the Lead Industries Association involving nine primer and finish paints.

The Technical Director reported on a recent Conference with Mr. Herbert Mandt of the Special Engineering Division, Panama Canal. This conference was held in the offices of the Carbide and Carbon Corporation and was attended by representatives of the Carbide and Carbon Corporation, National Lead Company, Amsoe Services, Inc. and the Lead Industries Association.

At this conference Mr. Mandt told of the extensive facilities available at the Panama Canal for evaluating paint systems and of the drastic and unique conditions encountered in Panama's tropical environment. Because of the unusually drastic exposure conditions, evaluation data obtained in the United States has little significance for determining the protective value of paints in the Canal Zone.

Mr. Mandt made a special point of the increasing use and importance of the application of Cathodic protection for all types of installations located in soil and in fresh and salt water. Since the use of Cathodic protection introduces another potentially destructive influence on paint coatings, particularly if close voltage control is not assured, a

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laboratory screening test has been developed by the Special Engineering Division to test the resistance of paint films to overvoltages. Square panels measuring four inches on a side are painted with various recommended paint systems and are tested in fresh water under a potential of 12 volts. Before testing, two equally spaced uniform pinholes are made in the paint film. The test is carried out for a six hour period or until effects are readily measurable. At the end of the test period all loosely adherent paint surrounding the pinholes is carefully scraped away. The area of metal thus exposed is arbitrarily taken as a measure of the suitability of the paint for the long time protection of Cathodically protected surfaces.

It was pointed out that of the many paint systems submitted to the special engineering Division several months ago, several showed poor results in this test, known as the "Disbonding Test". This was especially true of paints containing alkyd vehicles. Mr. Mundt did not remember the specific systems that failed this test.

Mr. Mundt said that a report containing the results of this and other laboratory screening tests was being compiled and would be sent to each cooperator in the near future. He also stated that additional paint systems would be accepted for inclusion in this project if received by October of this year.

The Technical Director said he would supply the members of the Red Lead Technical Committee with copies of the preliminary report as soon as it is received.

REVIEW OF PROPOSED ARTICLE FOR IRON AGE

A second draft of an article for Iron Age magazine describing new developments in red lead corrosion inhibitive paints for ferrous surfaces was reviewed by the Committee.

Although the technical content of this proposed article met with the approval of the Committee, several changes in composition were suggested and adopted. Mr. Ziegfeld and the Technical Director were asked to rewrite this article with the suggested changes and in a style appropriate for Iron Age.

AMERICAN IRON AND STEEL INSTITUTE REPORT ON PAINTS FOR ENCLOSED MEMBERS IN STEEL HOUSING CONSTRUCTION

The attention of the Committee was called to a recent technical report on a project being carried out at Battelle Memorial Institute under the sponsorship of the Technical Committee on Protective Coatings of the American Iron and Steel Institute. This report was read before the General Meeting of the American Iron and Steel Institute at New York, May 25-26, 1949. A copy of this report is attached to these minutes as Exhibit C.

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This report includes extensive laboratory data on the moisture resistance of thirty-four paint systems. Included in the investigation were red lead, iron oxide, zinc chromate, zinc dust, lead chromate and asphalt type paints. These paints were applied to 4 in. x 6 in. cold rolled sheet steel panels by dipping under carefully controlled conditions. The painted panels were dried in a constant-temperature and constant-humidity room (78°F, 50% R. H.) for at least three weeks before testing. Two panels of each set were subjected to various moisture tests in as-painted conditions and one intentionally damaged before exposure. The damage consisted of a uniform scratch ground lengthwise through the paint to the base metal with a machine shop surface grinder.

Sets of the damaged and undamaged specimens were then subjected to the following test conditions:

1. Partial immersion in distilled water at 100°F. for 3000 hours.
2. Continuous condensation conditions at 100°F. for 3000 hours.
3. Alternate wet and dry conditions for 7300 hours.
4. Continuous contact with neutral and alkaline type insulation in the presence of water for 500 hours.

On the basis of results obtained on the various types of paint compositions under the test conditions enumerated above it was concluded that the red-lead-in-oil paint system was outstanding. It had a high blister resistance rating, afforded excellent protection to the base metal and showed negligible undercutting in the intentionally damaged areas.

The Technical Director informed the committee members that he had contacted the American Iron and Steel Institute at the suggestion of Mr. Dickman and determined that they had no intention of further publicizing this report beyond printing it in their annual proceedings. They also stated that they would have no objection to the circulation of reprints of this report by the Lead Industries Association to mailing lists of engineers and other technical men.

The Red Lead Technical Committee agreed that the mailing of this report to architects, engineers and paint formulators would be advantageous and that the Technical Director should proceed accordingly.

The Committee was also told that Mr. Phair, Managing Editor of Iron Age magazine had agreed to publish this report if rewritten in the form of a technical article of suitable length. The Technical Director said that he would attempt to have the authors prepare this article or obtain their permission to rewrite it for Iron Age.

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NEXT MEETING

It was decided to hold the next meeting of the Red Lead Technical Committee on September 7, 8, 1949 at Sayville, Long Island and on September 9 in New York if the Agenda makes this necessary. A complete inspection of the Lead Industries Association Atmospheric Program specimens will be made during this meeting.

The meeting was adjourned at 5:00 P. M. on July 1.

C. J. Vander Valk
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Technical Director